

We claim:

1. A method for providing local delivery of a therapeutic agent, comprising the step of implanting said therapeutic agent into a portion of myocardial tissue.
2. A method according to claim 1, including the steps of
providing a catheter having a distal end adapted for delivering said therapeutic agent,
guiding said catheter into the interior of a patient's heart, and
disposing said distal end against an endocardial wall of the heart for implanting said therapeutic agent into the myocardial tissue.
3. A method according to claim 1 including the further step of,
providing a steerable catheter having a drilling element for penetrating an endocardial wall.
4. A method according to claim 1, including the step of
delivering a pellet containing said therapeutic agent into the myocardial tissue.
5. A method according to claim 4, including the step of
delivering sequentially a plurality of pellets containing said therapeutic agent into the myocardial tissue.
6. A method according to claim 1, including the step of
providing a pellet containing said therapeutic agent and a radio-opaque material.
7. A method according to claim 2, including the step of
steering said catheter through the femoral artery and into the heart.

8. A method according to claim 2, including the step of
positioning a marker in a selected portion of a coronary artery, for providing a
marker to identify a location for receiving said therapeutic agent.
9. A method according to claim 2, including the step of
penetrating said distal end of said catheter through said endocardial wall, for
delivering said therapeutic agent into said myocardial tissue.
10. A method according to claim 2, including the step of
delivering through said distal end of said catheter, a pellet having a pointed or
helical, conical end adapted to penetrate said endocardial wall.
11. A method according to claim 2, including the step of
delivering pellets containing said therapeutic agent and having an outer surface
adapted to adhere said pellets to said endocardial wall.
12. A method according to claim 1, including the step of
endoscopically delivering said therapeutic agent through the epicardium.
13. A method according to claim 1, including the step of
implanting said therapeutic agent into the myocardial tissue during open-chest
surgery.
14. A method for delivering a pellet containing a therapeutic agent, comprising the steps of
providing a catheter having a distal end adapted for delivering said pellet,
guiding said catheter through a body lumen and disposing said distal end proximate a
tissue wall, and
delivering said pellet through said distal end with sufficient force to implant said
pellet within said tissue wall.

15. A method for delivering a therapeutic agent to a septal artery, comprising the steps of providing a catheter having a distal end adapted for delivering said therapeutic agent, guiding said catheter into the interior of a patient's heart, and disposing said distal end against a septal wall of the heart for implanting said therapeutic agent into the septal wall.
16. A method according to claim 15, wherein the step of disposing said distal end of the catheter includes a step of, delivering a pellet containing said therapeutic agent from said distal end with sufficient force to implant said pellet within the septal wall.
17. A method according to claim 15, wherein the step of disposing said distal end of the catheter includes a step of, delivering from said distal end of the catheter a pellet containing said therapeutic agent and having a surface adapted to adhere to a tissue wall.
18. A method for treating vascular restenosis, comprising the steps of identifying a portion of tissue proximate to a site of a patient's vasculature to be treated for restenosis, and implanting a therapeutic agent into the portion of tissue.
19. A pellet, comprising a therapeutic agent surrounding a radio-opaque material, whereby delivery of the therapeutic agent is facilitated by viewing the position of the radio-opaque material relative to a position of a targeted site for implanting the pellet.
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20. Apparatus for implanting a therapeutic agent within a tissue wall, comprising an elongate flexible body having a proximal end and a distal end, a delivery chamber coupled to the distal end of the body and having a space for carrying the therapeutic agent, and a port for releasing the therapeutic agent therefrom, and

an actuator coupled to the delivery chamber and capable of driving the therapeutic agent through the port, whereby the therapeutic agent is implanted within a tissue wall.

21. Apparatus according to claim 20, further including
a control mechanism coupled to the actuator and the proximal end of the body for providing control of the actuator, whereby a user can operate the control mechanism for controlling the delivery of the therapeutic agent.
22. Apparatus according to claim 20, further including
a steering mechanism for turning the distal end of the body, to thereby allow the delivery chamber to be selectively guided through a body lumen.
23. Apparatus according to claim 20, wherein the delivery chamber and the distal end of the flexible body are dimensionally adapted to allow for transluminal delivery and for entry into the interior of a patient's heart.
24. Apparatus according to claim 20, wherein the delivery chamber includes a substantially cylindrical interior housing dimensionally adapted to store in axial alignment a plurality of minispheres containing a therapeutic agent.
25. Apparatus according to claim 20, further including
a pointed distal end adapted to penetrate a tissue wall for delivering the therapeutic agent within the tissue wall.
26. Apparatus according to claim 20, wherein the actuator includes
a plunger for driving the therapeutic agent from the delivery chamber.
27. Apparatus according to claim 20, further including
a ratchet assembly for allowing delivery of discrete volumes of the therapeutic agent.

28. Apparatus according to claim 20, wherein the actuator includes a threaded plunger for advancing into the delivery chamber responsive to a rotating action.
29. Apparatus according to claim 20, wherein the delivery chamber is adapted to receive at least one pellet containing the therapeutic agent.
30. Apparatus according to claim 20, further including a lever-action handle mounted at the proximal end of the flexible body and coupled to the control mechanism.
31. Apparatus according to claim 20, further including means for receiving at least one pellet containing the therapeutic agent and having an arcuate shape for facilitating implanting within a body of tissue.